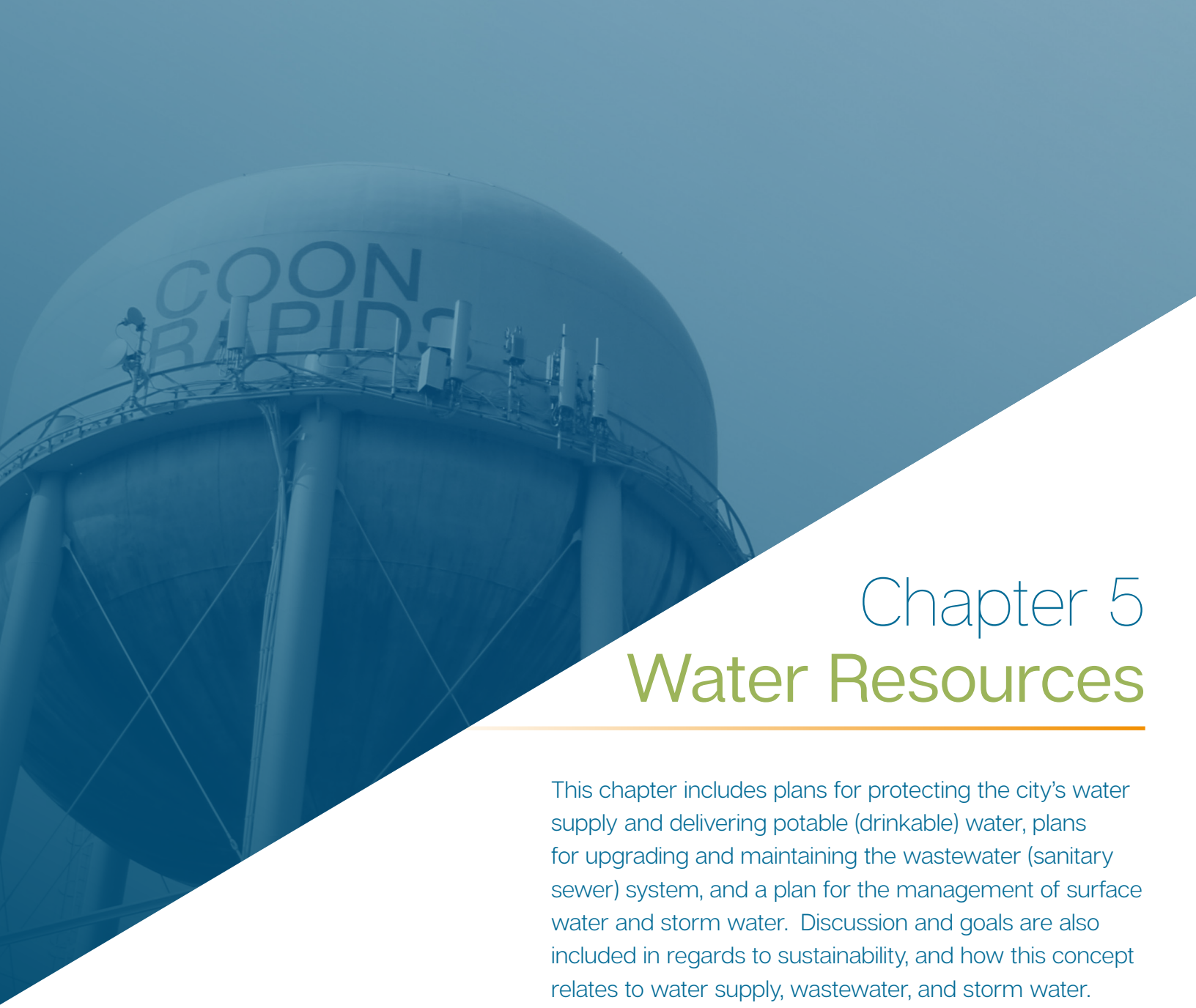


Chapter 5
Water Resources

This chapter includes plans for protecting the city's water supply and delivering potable (drinkable) water, plans for upgrading and maintaining the wastewater (sanitary sewer) system, and a plan for the management of surface water and storm water. Discussion and goals are also included in regards to sustainability, and how this concept relates to water supply, wastewater, and storm water.

Water Supply

Introduction

Coon Rapids utilizes groundwater as its source of drinking water. Raw water is supplied from 24 wells. A combination of aquifers including the Jordan, Wonewoc-Tunnel City, Mount Simon and glacial drift are utilized by the City to supply its domestic water needs. The City pumps an average of 8.2 million gallons of water per day (MGD) or approximately 3 billion gallons annually. There is capacity to pump a maximum of 38.3 MGD. Firm capacity is 35.9 MGD. Firm capacity is that which can be supplied reliably, even during maintenance activity or an emergency situation with the largest well pump (well 14) out of service. Maximum day water pumping capacity from existing high service pumping facilities is projected to be 54 MGD. The firm capacity of existing high service pumping facilities is 46.8 MGD. The system has a maximum storage capacity of 14.5 million gallons in its reservoirs and towers.

A *Comprehensive Water System Plan* update was completed in October of 2014. The inventory, analysis of needs, and recommendations for improvements to the system contained in the Plan form the basis of the Water Supply portion of this chapter of the Coon Rapids Comprehensive Plan.

Inventory

The water supply system consists of several wells, two treatment plants, water reservoirs and towers, and distribution lines.

Wells - Coon Rapids has 15 primary and 9 seasonal water wells. The table below provides information about the wells.

TABLE 5-1 City of Coon Rapids Well Inventory

City Well #	Year Installed	Design Pumping Capacity Gallons per Minute (gpm)	Design Pumping Capacity Million Gallons Per Day (mgd)	Source*	Status
1	1958	750	1.08	W-TC	System
2	1959	575	0.83	Wonewoc	System
3	Abandoned				
4	1960	1000	1.44	W-TC	System
5	1961	900	1.30	W-TC-MS	System
6	1961	1250	1.80	Jordan	System
7	1964	1600	2.30	W-TC	System
8	1965	1000	1.44	W-TC-MS	Primary
9	1969	1000	1.44	W-TC	Primary
10	1971	1000	1.44	W-TC-MS	Primary
11	1973	1200	1.73	W-TC-MS	Primary
12	1975	850	1.22	W-TC-MS	System
13	1977	850	1.22	W-TC-MS	Primary
14	1977	1650	2.38	W-TC-MS	Primary
15	1977	1400	2.02	W-TC-MS	Primary
16	1981	1500	2.16	MS	System
17	1981	1450	2.09	DRIFT	Primary
18	1986	1200	1.73	MS	System
19	1987	1100	1.58	DRIFT	Primary
20	1988	1100	1.58	DRIFT	Primary
21	1990	1200	1.73	DRIFT	Primary
22	1990	500	0.72	DRIFT	Primary
23	1992	500	0.72	DRIFT	Primary
24	2003	1500	2.16	W-TC	Primary
25	2003	1500	2.16	W-TC	Primary

*__Groundwater Source Abbreviations__: *Wonewoc-Tunnel City (W-TC), Wonewoc, Wonewoc-Tunnel City-Mount Simon (W-TC-MS), Jordan, Mount Simon (MS), Glacial Drift (DRIFT)*

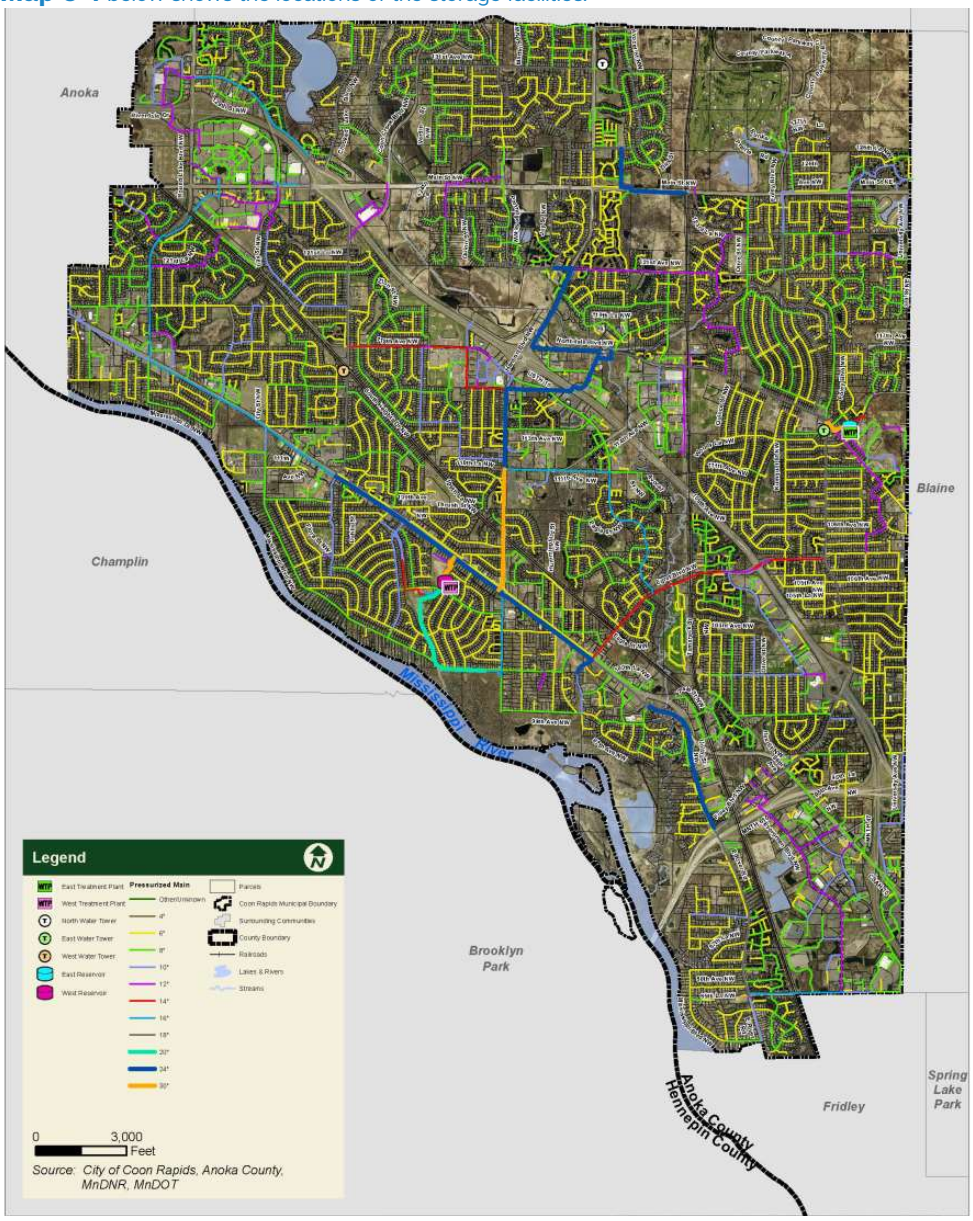
Reservoirs and Towers

There are three elevated storage tanks and two ground storage reservoirs. Table 5-2 below provides information on the location, year constructed, and volume of the storage facilities in millions of gallons (MG).

TABLE 5-2 Tower and Reservoir Location and Volumes

Storage Facility	Location	Constructed	Total Volume
East Water Tower	11316 Foley Boulevard	1958	0.5 MG
East Ground Storage Reservoir	Adjacent to the East Water Treatment Plant near Foley and Northdale Boulevards	1965	5.5 MG
West Water Tower	115th Lane and Eidelweiss Street	1960	1.0 MG
West Ground Storage Reservoir	2241 105th Avenue	1975	5.0 MG
Hanson Blvd. Tower	13101 Hanson Boulevard	2003	2.5 MG
Total Volume			14.5 MG

Map 5-1 below shows the locations of the storage facilities.



Treatment Plants

The East and West water treatment plants treat 15 of the City's supply wells. Water is treated and filtered to remove iron and manganese from the raw water, disinfect the water, and add fluoride.

Distribution Lines

The water distribution system is comprised of watermains ranging in size from 4 inches to 30 inches in diameter. There are 286 miles of watermain in the City system.

Pricing

The 2017 residential water pricing rates range from $2.00 to $2.65 per 1,000 gallons. The base fee is $16.00 per account. Water use is billed on a quarterly basis. The 2017 rate for commercial/industrial usage is $2.00 per 1,000 gallons, and $2.65 per 1,000 gallons for sprinkling meters.

Use

Residential users consume most of the water pumped by the City.

In 2013, the City pumped 2.67 billion gallons of water, which is equivalent to 7.3 million gallons per day. Approximately 10% of this pumped water is listed as unaccounted for, which is the amount of water that is pumped into the system, but is not billed. The amount of unaccounted for water can be reduced by metering City-owned facilities and estimating and accounting for water used for hydrant flushing and fire suppression.

The Metropolitan Council's projected future water use is shown in Table 5-4 below.

TABLE 5-4 Coon Rapids Projected Water Use in Million Gallons Per Day

Planning Year	Metropolitan Council Population Estimate	Per Capita Water Demand (gpcd)	Average Day Demand – Proposed Land Use	Max Day Peaking Factor	Maximum Day Demand – Proposed Land Use
2020	61,900	128	8.11	2.85	23.11
2030	65,500	128	9.05	2.85	25.80
2040	69,200	128	9.22	2.85	26.28

Drinking Water Quality – One or more contaminants regulated under the Federal Safe Drinking Water Act have been detected in trace amounts in one or more of the Coon Rapids water sources. The City currently operates Wells 16 and 18 under a compliance agreement with the Minnesota Department of Health (MDH) due to high concentration of radionuclides (Combined Radium 226 and 228). The City only uses Wells 16 and 18 as peaking wells during the summer to meet maximum day demands. However, the water supplied to users exceeds primary state and federal drinking water standards.

Conservation Efforts – Coon Rapids recognizes the need to conserve water. The City has a standing odd/even sprinkling ban from June 1 to August 31. Notification of the ban is given to residents in the summer city-wide newsletter and in utility billing documents. In addition, local ordinances (13-218 to 13-223) provide for additional emergency requirements when the need arises. The specific list of emergency restrictions is enumerated in ordinance 13-220. They include the following:

(1) Limitation on times of water usage

(2) Ban on lawn and garden sprinkling

(3) Ban on irrigation

(4) Ban on car washing

(5) Ban on usage of water for air conditioning or cooling

(6) Ban on all usage for specified periods

(7) Ban on washing mobile equipment

(8) Ban on cleaning outdoor surfaces

(9) Ban on washing buildings inside or out

(10) Ban on washing machinery and equipment

(11) Ban on the use of ornamental fountains

(12) Ban on pumping of additional water into swimming pools

(13) Any other reasonable restrictions

Needs

The City of Coon Rapids recognizes the following needs in the operation of its municipal water system.

- Protection of aquifers from pollution
- Enough water to adequately fight fires
- Conservation of the water resource
- Supplemental water supply in case of emergency
- Pressure improvements
- Elimination of dead-end lines
- Continuous tower and well rehabilitation
- Partial sealing of wells to prevent cross connection between aquifers

Goals, Objectives and Policies

The goals and policies below address these needs.

Goal #1

Provision of municipal water service to residents and businesses in the community in the most fiscally responsible and reliable manner possible.

Objectives:

1-1 Provide an adequate and reliable water supply.

1-2 Provide water at a reasonable cost.

Policies:

1-1 A well rehabilitation program will be continued to assure safe and reliable operation of the City's wells.

1-2 The City will develop the pumping capacity so that the firm pumping capacity (total system pumping capacity minus the top two producing wells) exceeds the projected daily use.

1-3 The City will continue to replace watermain pipe segments in areas where large numbers of breaks have occurred, as well as replacing outdated hydrant and valve components as part of its annual street reconstruction program.

1-4 The City will continue to use leak detection surveys as needed to reduce leaking watermains.

1-5 The City will continue an on-going meter repair and replacement program.

1-6 The City will establish an ongoing budget and program for decreasing losses in drinking water systems.

1-7 The City will assess energy and chemical use at drinking water treatment facilities, and report on changes that have a short payback period.

Goal #2

Provision of high quality drinking water that will not negatively impact the natural water resources of the community or region.

Objectives:

2-1 Maintain safe, unpolluted water.

2-2 Continued emphasis on water conservation.

Policy:

2-1 The City will continue its efforts to urge residents to conserve drinking water at all times of the year, not just during drought periods.

2-2 The City will review and consider the use of rate structure increases that impose higher unit rates for higher volumes of water used as a way of encouraging water conservation.

2-3 The City will place education materials related to water conservation in public buildings, on the City Website, and in utility billing mailings.

2-4 The City will review the creation of a demand-side management program to reduce demands on its water distribution system.

2-5 The City will promote or require purchase of US EPA Water Sense certified products in residential homes.

2-6 The City will promote water-wise and native landscaping.

Goal #3

Protection of the water resource to the extent possible through the continued use of an emergency preparedness program that allows for the City to supply quality water to community users in a prioritized manner.

Objective:

3-1 Provide adequate water for emergency situations such as fire or contamination of water supply.

Policies:

3-1 The City will continue its standing odd/even sprinkling ban from June 1 to August 31.

3-2 The City will implement a time of day or complete ban of outdoor water use in the event of an emergency. The guidelines for implementing these restrictions are indicated in City ordinances 13-218 to 13-222.

3-3 The City will protect water supply treatment facilities to reduce physical damage and sustain their function during extreme weather events.

Wastewater

Introduction

A sanitary sewer system to carry wastewater to the sewage treatment facility is a basic municipal service. Wastewater is the water that is either flushed or flows through a drain into the sanitary sewer system. All wastewater generated in Coon Rapids flows to a main metropolitan interceptor sewer pipe and eventually to the Metropolitan Wastewater Treatment Plant on the Mississippi River south of downtown St. Paul.

A plan to identify problems in the wastewater system and establish goals and policies to address system issues was prepared by Short Elliot and Hendrickson (SEH) and delivered to the City in January of 2018. That plan, titled *City of Coon Rapids 2018 Sanitary Sewer Comprehensive Plan*, should be consulted for detailed information. The highlights of that plan are included here.

Inventory

The Coon Rapids wastewater system includes over 240 miles of sewer pipe ranging in size from 4 inches to 48 inches in diameter. There are 16 sewage lift stations which serve small isolated areas. These lift stations serve approximately 10 percent of the city's population. An additional private lift station serves a small commercial area along Gateway Drive located in the northeast corner of Hanson Boulevard and Highway 10. There are neither private nor public wastewater treatment plants in the city.

The average daily flow (ADF) over the past five years is approximately 4.9 million gallons per day (MGD). Once the city is fully developed, the estimated average flow will be 6.68 MGD according to the *City of Coon Rapids 2018 Sanitary Sewer Comprehensive Plan*.

No new trunk sewers are planned in the city.

Map 5-2 shows Coon Rapids' existing sanitary sewer system including lift stations, and existing connection points to the Metropolitan Distribution System.

Map 5-3 shows the connection points between Coon Rapids and its surrounding communities.

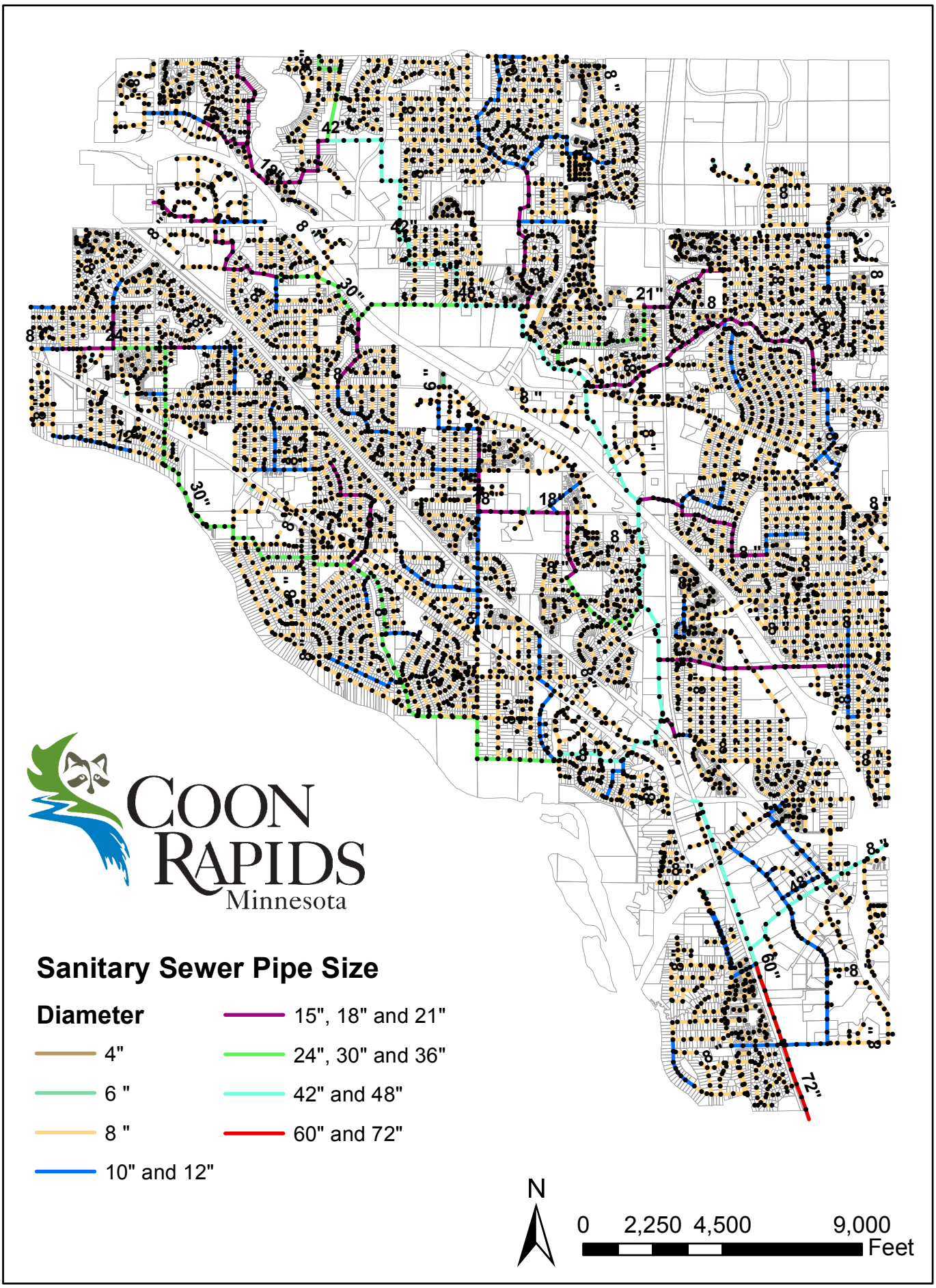
Appendix B in the *City of Coon Rapids 2018 Sanitary Sewer Comprehensive Plan* contains a table that provides the following information:

a. Capacity and design flows for existing trunk sewers

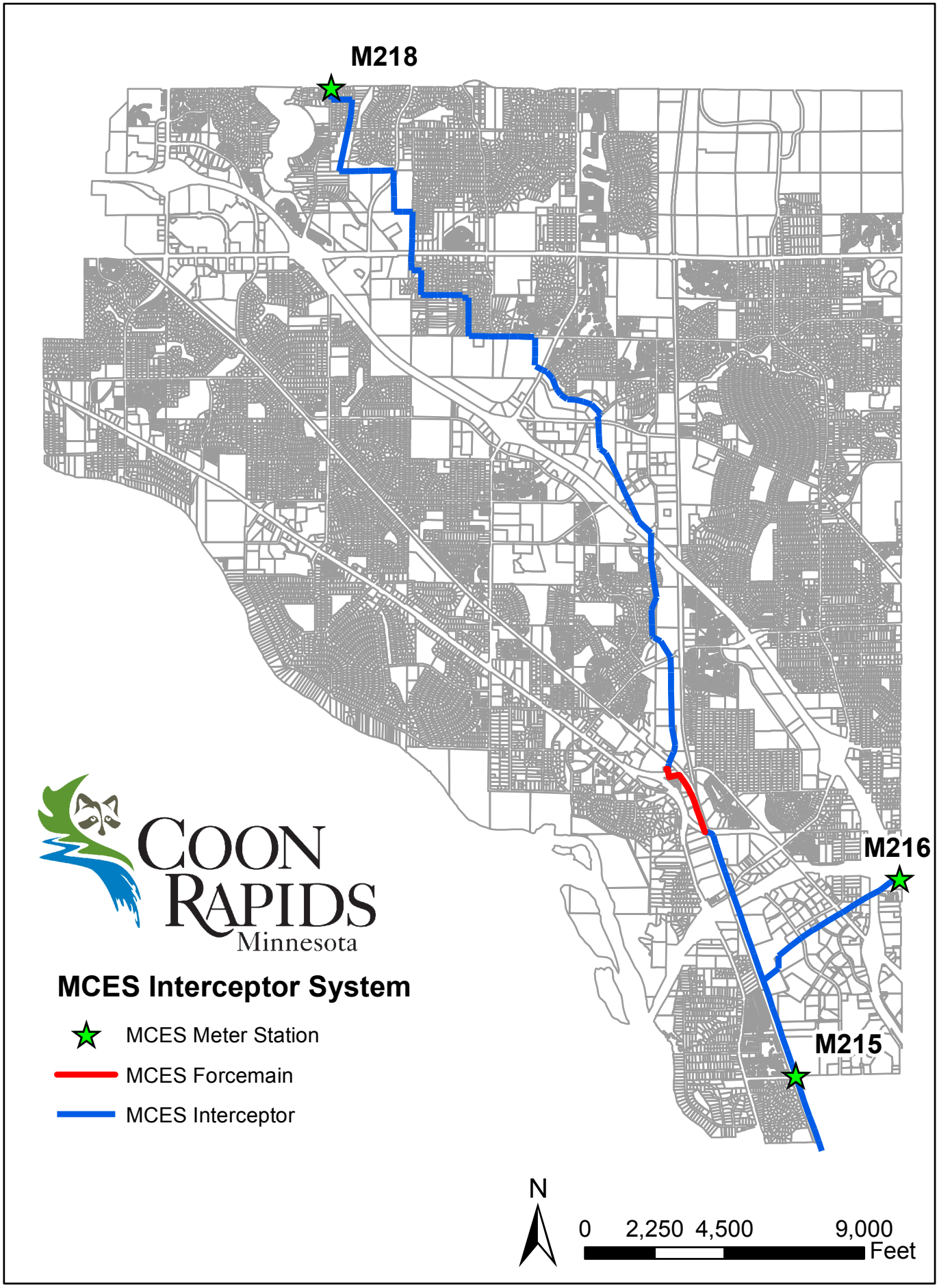
b. Information on the number of existing and potential connections

c. Projected flow volume through 2040 and build out

Map 5-2 - Existing System – Sanitary Sewer Pipe Sizes



Map 5-3 = MCES Interceptor and Inter-City Connections



Needs and Challenges

The forecasts of population, households, employment, and wastewater flows for Coon Rapids as contained in the Metropolitan Council 2040 Water Resources Policy Plan are listed in Table 5-6 below. These forecasts are for sewered development. The housing unit and household forecasts were estimated based on Sewer Availability Charge (SAC) data, annual City reports, current trends, and other information relating to Coon Rapids. The wastewater flows are based on historical wastewater flow data and the projected sewered housing and employment data.

TABLE 5-6 Projected Sewer Flow by Population, Household, and Employment

MCES Interceptor	Population			Households			Employment		
	2020	2030	2040	2020	2030	2040	2020	2030	2040
4-NS-521	2,280	2,500	2,715	957	1,050	1,133	3,718	3,852	3,952
4-NS-522	1,707	1,830	1,960	680	732	781	3,648	3,715	3,716
4-NS-525	55,060	58,020	61,065	21,744	23,455	24,984	17,793	19,212	20,902
7035	5,673	5,970	6,280	2,087	2,231	2,370	1,941	2,121	2,330
Unsewered	80	80	80	32	32	32	0	0	0
TOTAL	64,800	68,400	72,100	25,500	27,500	29,300	27,100	28,900	30,900

Source: Metropolitan Council 2040 Water Resources Policy Plan

The wastewater system needs are those characteristic of a mature community. Maintenance and selective replacement of an aging system is paramount rather than construction of many miles of new pipe and lift stations each year. Neither new sewers nor relief sewers are deemed necessary to handle the flow from their respective service areas. The City's challenges for the wastewater system are highlighted below.

- Developing an educational program for VCP services to inform residents of potential issues with their service connections, how that impacts the City's sanitary system, educating residents on ownership and maintenance responsibilities, and rehabilitation options. This includes service laterals with defects which allow inflow and infiltration and foundation drains and sump pumps connected to sanitary sewer services.
- Inspection, evaluation and potential rehabilitation for the 17 miles of reinforced concrete pipe (RCP) sewer currently installed throughout the city.
- Implementation of a public education program regarding "flushable" wipes, to encourage residents to not flush them and educate residents of the negative impacts of non-degrading wipes on the collection system.
- Continued inflow and infiltration (I/I) mitigation through existing programs as well as potential RCP sewer lining as identified above and continued manhole rehabilitation.
- Installation of fiber optic communications systems at all lift stations for uninterrupted communications.

Goals and Policies

Goal #1

Minimal claims against the City related to sewer backups.

Objective:

1-1 Provide reliable sewer conveyance for homes and businesses.

Policies:

1-1 The City will regularly clean and maintain sewer trunk lines, as well as replace lift stations as necessary.

1-2 The City will regularly televise and inspect sewers to determine their specific maintenance needs.

Goal #2

Standards and procedures for system maintenance.

Objective:

2-1 Provide safe and reliable sanitary sewer conveyance.

Policies:

2-1 The City will follow the standards suggested in the 2018 Coon Rapids Sanitary Sewer Comprehensive Plan adopted in 2018 including the recommended upgrades to several lift stations.

2-2 The City will continue to follow the requirements in Chapter 13-500 of its City Code that regulates Individual Sewer Treatment Systems.

Goal #3

Compliance with local and regional standards for wastewater management.

Objective:

3-1 Maintain continuous City compliance with wastewater standards.

Policy:

3-1 The City will work with the Metropolitan Council and other governmental agencies to regulate its trunk sanitary sewer system.

Goal #4

Continued inflow and infiltration (I/I) mitigation through existing programs, as well as potential RCP sewer lining and manhole rehabilitation.

Objective:

4-1 Reduce I/I into the wastewater system to the maximum extent feasible.

Policies:

4-1 The City will systematically inspect, line, and/or replace RCP and manholes as necessary to reduce I/I.

4-2 The City will continue to follow the requirements as set forth in Chapter 13-700 of its City Code. These requirements prohibit the discharge of any storm water, surface water, subsurface drainage, cooling water, or unpolluted industrial process water into any sanitary sewer. The City inspects properties at the time that water meters are changed to see if there are violations to Chapter 13-700. If there are, orders are issued to make corrections. The City will consider implementing penalties to property owners for discharging sump pump water into the sanitary sewer system.

4-3 The City will establish an ongoing budget and program for decreasing I/I into sewer lines.

Goal #5

Develop an educational program for VCP services to inform residents of potential issues with their service connections, how that impacts the City's sanitary system, educating residents on ownership and maintenance responsibilities, and rehabilitation options.

Objective:

5-1 An informed public that proactively maintains or rehabilitates private sewer services when necessary.

Policies:

5-1 The City will place information related to VCP service connections on the City website, articles will be published in the City newsletter, and information will be sent in utility billing mailers.

5-2 The City will inform residents of any service connection issues identified as part of the street reconstruction review process.

Goal #6

Inspection, evaluation and potential rehabilitation for the 17 miles of RCP sewer pipe currently installed throughout the City.

Objective:

6-1 Eliminate existing RCP sewer pipe as a source of I/I into the wastewater system.

Policies:

6-1 The City will coordinate the development of an inspection and potential lining program for RCP pipe similar to the one used for VCP pipe.

6-2 The City will perform an on-going review of its annual sewer rates and charges to ensure an RCP lining program, if needed, can be properly funded.

Goal #7

Implementation of a public education program regarding "flushable" wipes, to encourage residents to not flush them and educate residents of the negative impact of non-degrading wipes on the collection system.

Objective:

7-1 Create an informed public that does not flush "flushable" wipes into the sanitary sewer conveyance system.

Policies:

7-1 The City will place information related to "flushable" wipes on the City website, articles will be published in the City newsletter, and information will be sent in utility billing mailers.

7-2 The City will advocate for legislation that requires warning labels informing consumers not to flush these wipes down sewer drains.

Goal #8

Installation of fiber optic communications systems at all lift stations for uninterrupted communications.

Objective:

8-1 Connect lift stations via fiber optics to the City SCADA network.

Policies:

8-1 The City will perform an on-going review of its annual sewer rates and charges to ensure the installation of fiber optic communications systems at all lift stations can be accomplished within the next 10 years.

Storm Water

Introduction

Storm water refers to water that does not soak directly into the ground after a rainfall or snowfall event. It includes rain that falls on parking lots, roof tops, streets, steep slopes, and soils that are unable to absorb the rain as fast as it falls. This water flows into a complex system of natural ponds; ponds created as part of real estate developments, City streets, and into the streams, drainageways, and storm sewers that eventually flow to the Mississippi and Rum Rivers.

The volume and quality of the runoff are issues of public concern. Minnesota and federal regulations require that cities adopt ordinances that limit the amount of runoff so as to reduce flood damage, maintain surface water quality, and recharge groundwater.

Coon Rapids completed a major study in 2003 that resulted in the adoption of the *Comprehensive Storm Water Management Plan*. This plan was then recently updated in 2018 (referred to as the Local Surface Water Management Plan) in preparation of the City's 2040 Comprehensive Plan Update. The plan is intended to meet the requirements of the *Metropolitan Surface Water Management Act* and the Board of Water and Soil Resources (BWSR) Rules Chapter 810. The highlights of the City's updated storm water plan are included here.

Needs

The *Local Surface Water Management Plan* (updated in 2018) contains a detailed discussion of the storm water management challenges and needs in the city. It should be consulted for further information. That plan identifies 62 geographic storm water problem or water resource related issue areas. The storm water problem areas fall into three categories as follows:

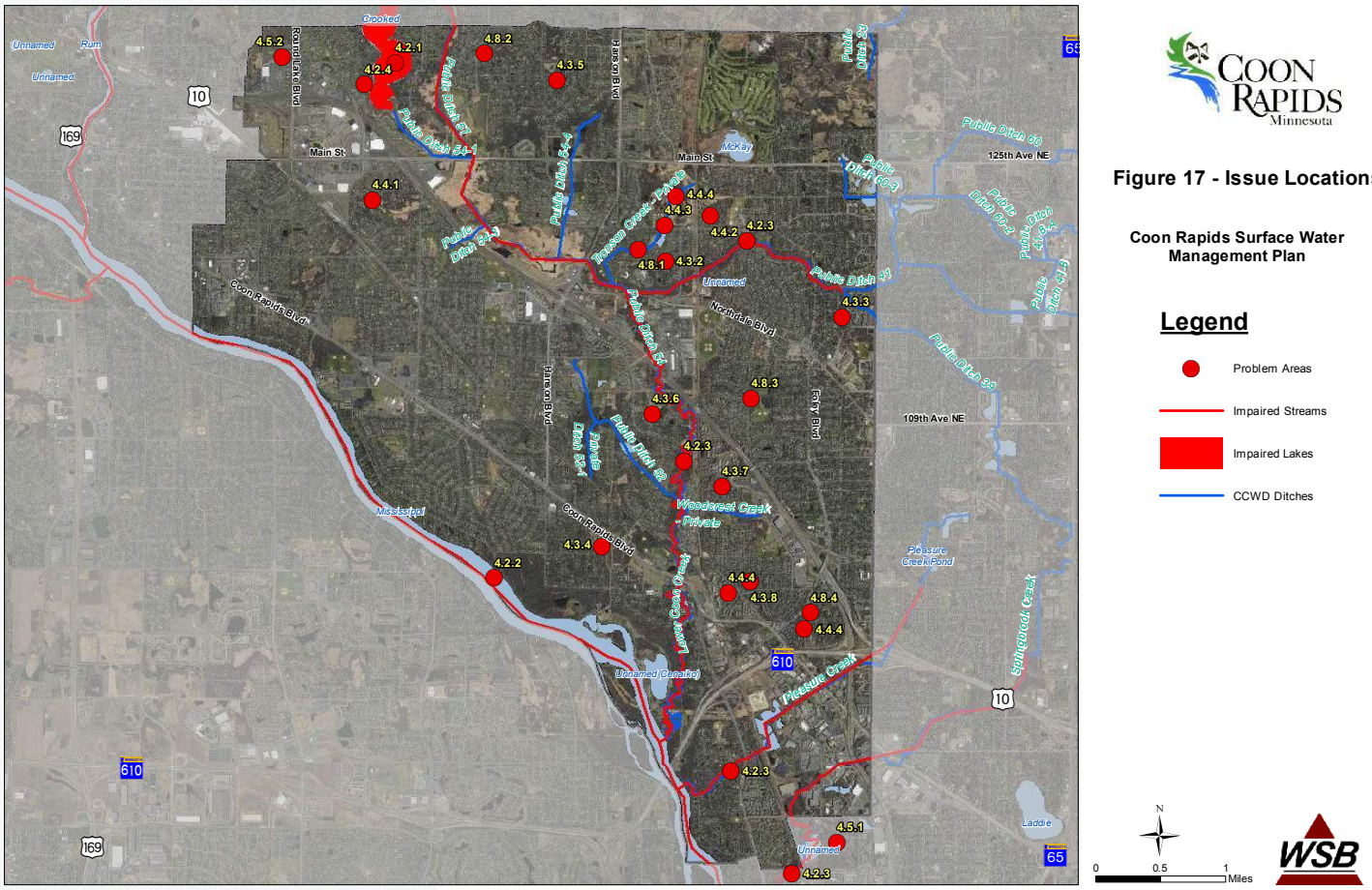
» Lake and stream water quality

» Flooding and storm water rate control within the city

» Flooding or storm water rate controls between the city and adjoining entities

Map 5-4

The attached Map 5-4 shows the location of the storm water problem areas in Coon Rapids.



A list of impaired surface waters in the City of Coon Rapids is as follows.

Table 5-7: Impaired Surface Waters in Coon Rapids

Waterway	Affected Use	Pollutant	Year Added	TMDL Status
Crooked Lake	Aquatic Consumption	Mercury in fish tissue	2008	Complete
Coon Creek	Aquatic Life, Aquatic Recreation	Biota, Fecal Coliform	2006, 2014	Complete
Sand Creek	Aquatic Life, Aquatic Recreation	Biota, Fecal Coliform	2006, 2016	Complete
Springbrook Creek	Aquatic Life, Aquatic Recreation	Biota, Fecal Coliform	2006, 2014	Complete
Pleasure Creek	Aquatic Life, Aquatic Recreation	Biota, Fecal Coliform	2006, 2014	Complete
Mississippi River	Aquatic Consumption, Aquatic Recreation, Aquatic Life	Mercury in fish tissue, Fecal Coliform, Excess Nutrients	2002, 2006, 2016	Mercury Complete, Fecal Coliform and Nutrients Underway

Map 5-5 shows the locations of impaired waters in Coon Rapids.

The City will continue to be responsible for reviewing all discharges from its Municipal Separate Storm Sewer System (MS4) and evaluating potential storm water impacts. If the City determines that its Storm Water Pollution Prevention Plan (SWPPP) does not meet goals for rate control and water quality, the City will make the appropriate modifications to its Engineering Design Standards and its SWPPP.

Goals and Policies

The City has adopted a number of goals and policies that conform to the overall purpose that is specified in Minnesota Statutes Section 103B.201. These goals and policies have been developed to complement county, regional, and state goals and policies.

The City's goals and policies are grouped by their relationship to key issues as follows:

1. Water Quantity
2. Water Quality
3. Wetland Management
4. Erosion and Sediment Control
5. Education and Public Participation
6. Groundwater Protection
7. Recreation, Fish, and Wildlife
8. Maintenance and Inspection
9. Public Ditch System
10. Financial Management
11. Mississippi River

Water Quantity - Stormwater Goal #1

Limit public capital expenditures to what is necessary to control excessive volumes and rates of runoff. Control the rate of stormwater runoff from development to reduce downstream flooding and erosion. Provide adequate storage and conveyance of runoff to protect public safety and minimize property damage. Implement the Common Drainage Problem Policy to address drainage issues reported by residents. Identify and address inconsistencies between CCWD's floodplain model and FEMA's flood zones.

Objective:

1-1 Protect homes and businesses within and downstream of the city from flooding.

Policies:

1-1 The City will implement development regulations and design standards contained within its Engineering Design Standards, Surface Water Management Ordinance, and Local Surface Water Management Plan to address water quantity goals.

1-2 The City will consider completion of the Blue Star stormwater management assessment and be recognized for implementing the actions therein. The Blue Star Award is a certification and award program established in 2010 that offers municipalities that excel in stormwater management positive public recognition. The City will explore the self-assessment process of Water Friendly Planning and Preservation, Stormwater Management Standards and Practices, and Stormwater Pollution Prevention. The City will continually review ways to incorporate assessment results into its design standards and development process.

Water Quantity - Stormwater Goal #2

Maintain or improve the quality of water in lakes, streams or rivers within or immediately downstream of the city.

Objective:

2-1 Maintain or improve water quality for property owners within and downstream of the city.

Policies:

2-1 The City will implement development regulations and design standards contained within its Engineering Design Standards, Surface Water Management Ordinance, and Local Surface Water Management Plan to address water quality goals.

2-2 The City will consider completion of the Blue Star stormwater management assessment and be recognized for implementing the actions therein. The Blue Star Award is a certification and award program established in 2010 that offers municipalities that excel in stormwater management positive public recognition. The City will explore the self-assessment process of Water Friendly Planning and Preservation, Stormwater Management Standards and Practices, and Stormwater Pollution Prevention. The City will continually review ways to incorporate assessment results into its design standards and development process.

2-3 Continue to implement Minimal Impact Design Standards (MIDS) for water quality requirements necessary on new and redevelopment projects.

2-4 The City will continue to offer incentives for stormwater infiltration and reuse practices, including rain gardens, infiltration practices, rainwater harvesting practices, pervious or permeable pavement/pavers, green roofs/walls, and tree trenches/boxes.

Water Management - Stormwater Goal #3

The City will coordinate and collaborate with the Coon Creek Watershed District (CCWD) to ensure conformance with the requirements of the Wetland Conservation Act (WCA) and no net loss of wetlands and their functions.

Objective:

3-1 Minimize or eliminate impacts to wetlands within the city.

Policies:

3-1 Coon Creek Watershed District is the Local Government Unit (LGU) for wetlands. The City will discourage wetland disturbance. The City will work cooperatively and coordinate with CCWD as wetland projects arise. The use of wetland banking opportunities will be pursued by the City in accordance with WCA and CCWD.

Erosion and Sediment Control – Stormwater Goal #4

The City will require prevention of sediment from construction sites as well as established areas including agricultural areas from entering the city's surface water resources and storm sewer system. The City will repair erosion problems on City-owned property and issue orders for private landowners to do the same when erosion problems transport sediment from the property in question.

Objective:

4-1 Minimize or eliminate sediment from entering water resources within and downstream of the city.

Policies:

4-1 The City will require all construction projects disturbing land to follow requirements of the National Pollution Discharge Elimination System (NPDES) permit.

4-2 The City will implement design techniques and Best Management Practices contained within its Engineering Design Standards, Surface Water Management Ordinance, and Local Surface Water Management Plan to address erosion and sediment control priorities on construction and development projects.

4-3 The City will make repairs to public infrastructure when necessary to eliminate erosion and sediment transport.

4-4 Property owners will be required to make repairs to private property when directed to do so by the City in the public interest of minimizing or eliminating soil erosion.

4-5 The City will sweep streets twice annually and more often in sensitive areas

Education and Public Participation – Stormwater Goal #5

The City will inform and educate the public concerning urban stormwater management and the problem pollutants. The public will be provided opportunities to comment on surface water management activities and become directly involved in these activities.

Objective:

5-1 Educate and provide for a more informed public that's engaged in water resource issues.

Policies:

5-1 The City will continue an education program which utilizes the following mediums: city newsletters, community access cable TV, individual mailings, and the City website.

5-2 The City will continue to utilize public education and outreach programs to satisfy the minimum control measures identified in the City's NPDES MS4 permit.

5-3 Public education programs will include close coordination with outside entities like CCWD, Anoka County, DNR, MPCA and others.

Groundwater Protection – Stormwater Goal #6

The City will promote recharge of groundwater by requiring infiltration where appropriate to mitigate for the increased impervious surfaces associated with development. The City will protect drinking water and wells by restricting infiltration where underlying geologic formations might convey surface water directly into groundwater aquifers as found in the Wellhead Protection Plan. The City's groundwater protection policies are intended to preserve groundwater levels and flow and protection of drinking water supplies. Promote consistent groundwater protection regulations between agencies including MPCA, DNR, CCWD, and MDH.

Objective:

6-1 Protect groundwater within the City and associated Drinking Water Supply Management Areas that include Coon Rapids and its neighboring cities.

Policies:

6-1 The City will implement its approved wellhead protection plan.

6-2 The City will cooperate with state and regional agencies on ground water monitoring, inventorying or permitting programs.

6-3 The City will work towards groundwater protection through the implementation of floodplain and shoreland ordinances in conformance with state and county regulations.

6-4 The City will encourage the development of alternative storm water management methods including vegetated swales and infiltration practices provided these methods do not contaminate ground water.

6-5 The City will cooperate with MDH to ensure that all unsealed or improperly abandoned wells within the city are properly sealed. Technical requirements for the abandonment of these wells will be in conformance with local and state regulations.

6-6 The City will sweep streets twice annually and more often in sensitive areas.

Recreation, Fish, and Wildlife – Stormwater Goal #7

The City will protect recreational opportunities and fish and wildlife habitat for the benefit of its residents. The City's recreation and fish/wildlife policies focus on access, connectivity, preservation, and control of exotic and invasive species.

Objective:

7-1 Protection and preservation of water resources for the purposes of recreation, fishing, and wildlife habitat.

Policies:

7-1 The City will cooperate with the DNR, the Corps of Engineers, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, the Anoka County Parks, and other appropriate agencies in promoting public enjoyment and protecting fish, wildlife, and recreational resources in the city.

7-2 Restoration of the city's fish and wildlife resources will be undertaken as outlined in the City's Parks, Open Space, and Trail System Plan. Activities to restore and/or maintain the city's habitat resources include prescribed burning, weeding/brushing, seed harvesting and disbursement.

7-3 The City will preserve wetlands that provide habitat for wildlife and spawning of fish.

7-4 The City will work to create wildlife corridors throughout the city where feasible.

7-5 The City will create and encourage native buffers around lakes and wetlands whenever possible to increase wildlife habitat. The City currently has an ordinance in place to encourage the use of native vegetation landscaping.

7-6 The City will continue to work with the CCWD to implement their fish and wildlife policies.

7-7 The City will partner with CCWD and the Crooked Lake Area Association (CLAA) to implement items in the Crooked Lake Management Plan to manage aquatic invasive species.

7-8 The City will implement its goose management plan to reduce total phosphorus loading to lakes and streams.

7-6 The City will coordinate with local and state agencies to protect threatened and endangered plant and animal species.

Maintenance and Inspection – Stormwater Goal #8

The City will continue an active storm sewer system maintenance and inspection program per the MS4 permit requirements. The City will review and address existing ponds and outlet structures lacking adequate easements for maintenance.

Objective:

8-1 Provide a high level of ongoing maintenance and inspections of existing publicly-owned storm sewer infrastructure and related appurtenances.

Policies:

8-1 The City will continue to implement an annual inspection and maintenance program as required by the City's NPDES MS4 permit. Infrastructure to be inspected includes outfalls, water quality BMPs, and stormwater ponds.

8-2 The City will require and enforce adequate access to ponding facilities including outlots and easements.

8-3 The City will identify pond and outlet structure locations that present access issues to its maintenance staff and develop options to address.

8-4 The City will implement the Stormwater Asset Management Program (SWAMP) that identifies and prioritizes pond maintenance activities and BMP inspections.

8-5 The City will continually perform inspections and maintenance on public roadways through reconstruction reviews and financial investments.

8-6 The City will implement the SWAMP results to schedule and track MS4 inspections and prioritize maintenance activities in coordination with CCWD.

Public Ditch System – Stormwater Goal #9

The City will provide a mechanism for management of public and private ditch systems.

Objective:

9-1 Manage the ditch systems within City jurisdiction so as to convey public drainage in a manner that conforms to City policy and ordinances.

Policies:

9-1 The City will continue to work with CCWD to provide inspection, maintenance and repair of all private ditch conveyance systems in the City's jurisdiction. Ditches will be inspected to ensure unobstructed conveyance as outlined in the Common Drainage Problem Policy.

9-2 The City will maintain the ditches in its jurisdiction in conformance with City ordinances.

Financial Management – Stormwater Goal #10

The City will utilize available funding mechanisms to construct and maintain a sustainable stormwater management system.

Objective:

10-1 Adequately provide funding for construction and maintenance of a sustainable stormwater management system.

Policies:

10-1 The City will utilize various funding sources including, but not limited to area charges, stormwater utility and grants to accomplish improvements listed in this surface water management plan and other surface water documents.

10-2 The City will pursue grants, donations, and in-kind contributions to help fund stormwater projects.

10-3 The City will educate residents on the financial responsibilities (City versus property owner) for certain drainage issues. These will be outlined in the City's Common Drainage Problem Policy.

10-4 The City will encourage the watershed district to finance intercommunity and regional stormwater related issues and projects.

10-5 The City will financially partner with other agencies/groups to address water quality issues. These agencies may include, but are not limited to, the Crooked Lake Area Association, the Coon Creek Watershed District, and the Cities of Andover, Anoka, Blaine, and Fridley.

Mississippi River – Stormwater Goal #11

To continue to protect and preserve the Mississippi River corridor, Mississippi River, and associated wetlands.

Objective:

11-1 Adequately provide environmental protection of the Mississippi River and related tributary water resources.

Policies:

11-1 The City will work cooperatively with Federal, State, and County agencies in the development of resource management and implementation plans affecting the Mississippi River.

11-2 The City will apply the Mississippi River Corridor Critical Overlay policies where appropriate.

11-3 The City will continue its partnership with USGS and neighboring cities to monitor the newly installed stream gauge. This will be used to monitor bank protection and emergency management planning.

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